

Addressing Machine Used In Epidemiological Study

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MACHINE records of various types have been used in large-scale epidemiological studies for many years. The use of addressing equipment for this purpose, however, is less common.

At Fort Dix, N. J., an addressing machine (A) was used to prepare rosters, file cards, and labels, in a large-scale study of the effectiveness of gamma globulin against acute respiratory disease. This technique, efficient and accurate, may prove useful in various types of epidemiological studies.

The Fort Dix study, carried out during the winter of 1954-55, was designed to determine whether gamma globulin had either prophylactic or therapeutic effect against acute respiratory disease. Participants were divided into two groups, one to receive prophylactic gamma globulin and the other to receive a control substance. Records of hospital admissions for respiratory illness were kept for comparison of incidence in the two groups. Alternate patients were given therapeutic doses of gamma globulin, and the others received injections of another control material. For these subgroups, duration of hospital stay was used to evaluate gamma globulin effectiveness.

As plans for the study progressed, the need for short cuts to expedite clerical work and assure accuracy of records became evident. One technique adopted was the use of an addressing machine for reproducing data identifying the participants. An addressing machine and a graphotype embossing machine with various accessories were available, and it was planned to cut plates for each individual in the study. It was learned, however, that address plates were prepared for each Army inductee by the reception station at the camp

and then destroyed after rosters were made. These plates were made available to the research team.

The address plates were picked up daily, together with copies of orders assigning the men to a training company. When plates for a full company were available, they were arranged at random. The original roster number of each plate was effaced and a project number of four digits was added. Project numbers began with 0001 for the first name in the first company and continued in sequence for each subsequent company. Each plate then contained the serviceman's name, Army service number, rank, date of birth, race, and project number.

From these modified plates, appropriate rosters, file cards, individual worksheets, and adhesive tape labels for blood specimens were prepared on the addressing machine. One file drawer holds 200 address plates, almost enough for a full company of men, and can be fed into the machine to run off a roster in 3 or 4 minutes. The adhesive tape labels were made by putting strips of 4-inch adhesive tape on old X-ray film and running this through the imprinter.

Three sets of file cards were made. One was kept in the dispensary, where dates of sick call visits were recorded. A second was kept in the hospital admission office, where dates of hospital admissions were recorded. A third, or master file, was maintained in the medical research office, where dates of inoculation, taking of subsequent blood samples, sick call visits, and hospitalizations were all recorded. All data were recorded on a worksheet for each individual in the study. These worksheets were sent to the laboratory for addition of laboratory findings and then to a consulting statistician for completion and discussion of the data.

Handling of demographic data obtained over an extended period of time from a population which is fluctuating in size and undergoing several complete turnovers is never easy. It is especially difficult when much of the information must be compiled by inexperienced personnel. Preparation of long rosters may require many hours of work, and great care must be exercised to avoid mistakes.

The use of addressing equipment is one

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method of doing the job with speed and accuracy. A roster for 200 people can be prepared by relatively untrained personnel in less than 5 minutes. With small adjustments in the machine, rosters can include any or all of the data from each plate.

Preparation of the plates is likewise easy. Although plates already cut were used in the study described here, we have found in subsequent studies that it is easier to prepare new plates than to use the old ones. Persons with no previous training can be taught to operate the embossing machine with an hour's instruction. They become proficient in a day or two.

There are definite limitations to the use of this type of equipment. If there is a great number of subjects, storage of plates poses a problem. The number of items that can be

recorded for each individual and the number of variables that can be measured are limited. However, a tabbing system will extend the usefulness of the plates. The tabs permit selection by the machine of plates with the data desired, enabling both counts and printed rosters to be made in one operation.

Though addressing equipment is not adaptable to every type of study, it can be used to advantage in studies involving references to lists, card sorts, label preparation, item duplications, and the like for as many as 20,000 individuals.

EQUIPMENT REFERENCE

- (A) Addressograph machine, Addressograph-Multi-graph Corporation, 1200 Babbitt Rd., Cleveland, Ohio.

technical publications

Control of Radon and Daughters in Uranium Mines and Calculations on Biologic Effects

PHS Publication No. 494. 1957.
By Duncan A. Holaday, David E. Rushing, Richard D. Coleman, Paul F. Woolrich, Howard L. Kusnetz, and William F. Bale. 89 pages.

Through a long-range study, the Public Health Service seeks to define the effects of uranium mining operations on the health of the miners and to derive data leading to the establishment of a healthful working environment.

Although no evidence of health damage has been found among American miners, the European experience points to possible serious health effects. As a preventive measure, early in the industry's growth, the Public Health Service recommended steps to safeguard the health of the miners.

This technical bulletin describes the results of the environmental study to date, together with the work of other investigators, with reference to methods of measuring atmospheric concentrations of radon and daughter products, the establishment of a safe working level for radon daughter products, and the development of effective control measures.

The material is designed for use by the industry and others in evaluating health hazards and in deriving economically feasible control methods.

The Communicable Disease Center

PHS Publication No. 491. 1957.
25 pages; illustrated.

Not an annual report, this pictorial brochure provides an easily read introduction to the communicable disease problem and to the ac-

tivities of the Communicable Disease Center, Bureau of State Services, Public Health Service.

The pamphlet shows the extent of the communicable disease problem in the United States. It gives the history and mission of the CDC and tells how CDC helps to carry out the Federal Government's responsibility for communicable disease control through epidemic and disaster aid, studies, consultation, demonstrations, and training.

This section carries announcements of all new Public Health Service publications and of selected new publications on health topics prepared by other Federal Government agencies.

Publications for which prices are quoted are for sale by the Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C. Orders should be accompanied by cash, check, or money order and should fully identify the publication. Public Health Service publications which do not carry price quotations, as well as single sample copies of those for which prices are shown, can be obtained without charge from the Public Inquiries Branch, Public Health Service, Washington 25, D. C.

The Public Health Service does not supply publications issued by other agencies.
